We learn of Dmitrii Ivanovich Mendeleev, a remarkable Russian encyclopedic scientist and philosopher, when first studying chemistry at school. This year we celebrate the 175th anniversary of his birth and the 140th anniversary of his discovery of the Periodic Law and the creation of the Periodic Table of Chemical Elements—one of the most brilliant discoveries in world science. However, Mendeleev’s genius left its mark on different fields of knowledge, imparting to us fundamental works in each of these fields, whether it was chemistry, physics, meteorology, metrology, economics, education, philosophy, sociology, technical disciplines (shipbuilding, aeronautics, gunpowder-making), industry and agriculture [1–7]. It would be almost impossible to encompass the vast literature dedicated to Mendeleev (and his achievements). We will touch upon (within a general context) certain particular aspects of the scientist’s biography, including facts scarcely known (or even unknown) to the public at large. The dates below are mainly given under the old (Orthodox) calendar.

Familial Roots in Tver

Few people know that Mendeleev, Siberian in terms of his birthplace, had the roots of his origin in the Tver region [7–14]. His grandfather Pavel Mikhailovich Sokolov served in the 1760s–1780s as a priest of the Virgin Patroness Church in the village of Tikhomandritsy of the Vyshnii Volochek district, Tver Province (now the Udomlya district, Tver oblast). He and his wife Stepanida Evdokimovna had four sons (Vasilii, Timofeii, Aleksandr, and Ivan) and three daughters (Natal’ya, Tat’yana, and Proskov’yya). Their sons studied at the Tver Orthodox Seminary and were all (except Timofei) given new different surnames: Pokrovskii became Vasilii (according to his father’s parish), Aleksandr became Tikhomandritskii (according to the village and river), and Ivan became Mendeleev (according to one version, his teachers named him thus because this name sounded like “to make an exchange,” similar to the name of a neighboring estate’s owner Mendeleev, who exchanged horses and other items[1] [15]; the seminary student loved exchanging babki—stones for a popular game). Thus, this famous surname originated in Tver.

1This version is given in the genealogy compiled by Pavel Mendeleev, the scientist’s brother.
Ivan Mendeleev was born on February 16, 1783, in Tikhomadritsy. After finishing the Tver Orthodox Seminary, he entered (in 1804) the Pedagogical Institute in St. Petersburg, and on graduation in 1807, Ivan was sent to Tobol'sk, where he became a teacher of “philosophy, fine arts, and political economics” at the classical gymnasium. In 1809 he married Mariya Dmitrievna (of the Kornil'ev family of Siberian tradesmen). In October of 1818 he was appointed director of specialized schools in the Tambov Province. In 1823–1827 the Mendeleevs lived in Saratov, but after that returned to Tobol’sk, where Ivan Pavlovich became the director of Tobol’ sk’s gymnasium. Dmitrii was their 17th child, born on January 27, 1834 (February 8 new style).

The year Dmitrii’s was born, his father went blindness (due to cataracts). After a successful surgery in Moscow, his vision was restored, but he could not return to his profession. Ivan Mendeleev died on October 12, 1847.

**Life Story**

When Dmitrii finished the gymnasium (grammar school) in 1849, his mother took him and his sister Elizaveta to Moscow to arrange for his education at Moscow University. However, her attempts were unsuccessful, since the Tobol’sk gymnasium administratively fell within the Kazan educational district and by the existing rules Dmitrii could only be admitted to Kazan University. The Mendeleevs wintered in Moscow and left for St. Petersburg in the spring of 1850, hoping to help Dmitrii enter one of the capital’s higher educational establishments. The door to St. Petersburg University was closed to Dmitrii (for the same above reasons). The Mining Institute and the Medical Surgical Academy were also excluded. The Main Pedagogical Institute (MPI), of which his father was a graduate, remained the only option. However students were admitted there only once every two years and 1850 was a “no entrance” year. At last, only thanks to his mother’s pains, and exception was made for Dmitrii; after having passed the entrance exams, was admitted to the MPI Physical and Mathematical Faculty in August of 1850 as a state-supported student.

The strong stress she suffered appeared to be fatal for his mother. Her condition was worsening for no visible reason; and on September 20, 1850 she was admitted to the university infirmary. University physician Krebel’s verdict was a lethal outcome. “As for this one, he won’t rise again,” Krebel once commented to the director during his rounds, misjudging that Dmitrii was sleeping.

Despite the disease, Mendeleev managed to continue his studies. The teachers at the MPI were the first-class scientists of the time, and they had a strong influence on forming a future scientists personality. Among them were the chemist A.A. Voskresenskii, mathematician M.V. Ostrogadskii, physicist E.H. Lenz, botanist I.O. Shikhovskii, zoologist F.F. Brand, and mineralogist S.S. Kutorga. In May 1855, Mendeleev brilliantly graduated from the institute—the first graduate of his year with a gold medal.

After graduation, Mendeleev remained at the institute as a postgraduate for a masters degree. However, physicians recommended that he leave for the south. In early October 1855 Mendeleev left for Simferopol, where he was to occupy the position of a senior teacher in natural sciences at a gymnasium. But the Crimean War was being waged and the gymnasium was closed. In Crimea, Mendeleev consulted N.I. Pirogov, the famous surgeon, who diagnosed him with a not very severe cardiac valve failure and restored the young man’s confidence in his own vital strength. Mendeleev remembered the great doctor with admiration: “He was a genuine physician! He could see right through to every human, and he understood my nature at once.” Later in October 1855 Mendeleev left for Odessa, where he took the position of a teacher at the Richelieu Lycee.

In April 1856 Mendeleev left Odessa for St. Petersburg, where he successfully passed his master’s degree exams and in September defended his master’s dissertation. In January 1857 he became a private assistant professor of St. Petersburg University. In 1859 the young scientist was sent abroad to Heidelberg (the prominent scientists Kirchoff and Bunsen worked there) on a two-year study tour for sciences, during which he managed to visit many European cities. He also participated at the International Congress of Chemists in Karlsruhe in 1860.

On returning to St. Petersburg in February 1861, Mendeleev continued teaching at the university (and in parallel at some other higher educational establishments). In January 1865 he defended his doctoral dissertation “The Compounds of Ethyl Alcohol with Water” and was promoted first to a rank of extraordinary professor and then—ordinary professor at the chair of technological chemistry at the university. In 1867 he succeeded Voskresenskii, his mentor, as the...